Tourism seasonality and potentiality of development in the Como lake area.
A first exploratory study

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Abstract:
The current growing competition in the tourism market among regions and regional products accentuates the importance of managing and enhancing local resources of each area according to its competitive edge. The Province of Como is facing a strong tourism growth in the last few years. This could be the key to overcome the productivity slowdown which has been characterizing the area of study in the last fifteen years. This paper addresses the need for an understanding of the evolution of international and domestic tourism in the Province of Como. By analyzing data on annual tourist arrivals and presences, we are able to study the relationship between seasonality patterns and the development of the tourism sector. The methodology adopted is based on a regression analysis approach, by using the seasonal adjustment procedure TRAMO-SEATS. The last part of the paper identifies possible paths of development for the Province of Como aimed at reducing seasonality and acting both on the demand and on the capacity.

Keywords: seasonality, Como Lake, TRAMO-SEATS; tourism development; destination management.
Article Classification: case studies

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1. Introduction

Recently, tourism has been recognized to have a crucial role in the Italian economy. According to the World Travel and Tourism Council, the total contribution of tourism to the gross domestic product has been 8,9% in 2011 and represents one of the most important economic activity, mainly generated by the domestic demand. As a result, the economic contribution of the domestic tourism is dominant with respect to international flows, in terms of both economic contribution and employment.

This is not the case for the Province of Como which received in 2011 1.021.709 tourists, 67% of whom were foreigners. Located in the Northern Italy, the Province of Como seems to be in a strong growth phase, having experienced a 81% increase in total tourist arrivals between 2000 and 2010. This area has a great tourist potential essentially due to the quality of the local endowment of natural and cultural resources (e.g. the presence of the Como lake). However, it is no longer possible to base the success of this destination only on these competitive advantages: the current growing competition in the tourism market between regions and regional products, even between destination areas of the same country, accentuates the importance of managing and organizing local resources according to competitive strategies that could make the Province of Como a direct competitor of the major European destinations, by considering the peculiarity of each territory. The revival of regional identity and the current development of regional marketing policies is manifest in many different areas and the process of developing a regional identity has to some extent also become a marketing strategy in tourism.

Thus, a careful analysis of the area is necessary as well as a long-term destination management planning. In that respect, tourism policies assume a central dimension in the local development of this specific area, and it becomes essential to focus on a culture of

tourism as a strategic resource to enhance the places and their identity. Tourism, in fact, can represent a powerful engine for regional development.

In spite of that, only recently researchers and operators of the destination have started to concentrate on this phenomenon and its economic impact on this local economy, which is experiencing a crowding out effect of some traditional sectors and a consequently slowdown in productivity.

This exploratory study addresses the need for analysing and understanding of the evolution of international and domestic tourism in the Province of Como to evaluate criticism and potentiality of tourism development. This is examined across three dimensions: general, i.e. the total of arrivals and presences; national tourism, i.e. arrivals and presences of Italian tourist; and finally international tourism, i.e. arrivals and presences of international tourists. Thus, considerations relating to the seasonality are combined with the supply side of the tourism sector and some policy implications are derived. The analysis is based on a wide range of statistical resources on tourist demand in the Province of Como extracted from the "Chamber of Commerce of Como - Osservatorio Provinciale sul Turismo", that covers the period 1998-2011.

From a methodological point of view we have applied the seasonal adjustment program TRAMO-SEATS (Gómez and Maravall, 1996).

In particular, this paper aims to grasp the specificity and the criticism of tourism sector demand growth in the Province of Como. Starting from a brief review of the literature (§ 2) the tourism phenomenon and its seasonality is analysed (§ 3), and then some possible policies (§ 4) are considered to improve the attractiveness of the area.

2. Seasonality and Methodology

Academic literature and practitioners have studied demand seasonal variations in tourism (Chung, 2009). Seasonality is generally connected with the phenomenon of demand

fluctuations in the tourism sector according to the "season" (Allcock, 1989; Butler, 2001) and varies considerably from location to location, not only within destinations but also within regions. The pattern of seasonality of a destination depends on the way in which the public and private sectors modify and influence the interaction between natural and institutionalised factors (BarOn, 1999; Butler, 2001). The most spread model for tourism demand is the single-peak pattern (for the majority of Italian destinations) even though, at a regional level, sometimes the main season is accompanied by another peak during the year (Vergori, 2010) or extended to shoulder seasons.

Mature tourism destinations, where the growth is ceased and numbers are relatively stable, are focused mainly on off-season and on the development of methods to spread tourism throughout the year (Butler, 2001; Rosselò-Nadaal, Riera Font, and Sansó Rossello, 2004).

In the literature on seasonality in tourism many measures have been considered (Sutcliffe, and Sinclair, 1980; Lundtorp, 2001; Koenig-Lewis and Bischoff, 2005). We adopt the time-series regression approach, which allow us to consider both seasonally unadjusted data (see Lim and McAleer, 2001) and adjusted data (Candela et al., 2007). To model and measure seasonality, different procedures are available. We choose to use the TRAMO-SEATS program, one of the most widely used methods for seasonal adjustment of official statistics around the world.

3. The case study: the evolution of tourism in the Province of Como and its seasonal patterns

A first visual examination allows us to note that the Province of Como has seen a strong positive performance in the tourism industry (see Fig. 1 and 2). Since 2002, there has been a steady growth of both arrivals and presences. The year 2010 ended with about 952,000 people who have stayed in the Province for approximately 2,540,000 nights. This trend is reflected both in national and in international arrivals of tourists. It has to be noted that the arrivals and presences of foreign tourists play a dominant role in the provincial tourism sector. In fact, the

share of foreign presences is higher than the regional and national average (above 70% compared to 42,2%). Thus, it represents a clear exception with respect to the national tourism, confirming its very high international attractiveness (this will help to explain some features emerging in the subsequent analysis).

Despite this increasing trend of arrivals and presences, the provincial tourism suffers both from a low average stay (see Fig. 3) and from a strong seasonality.

As it is possible to see from Fig. 6, international visitors spend more nights in the Province of Como than Italians do. The average length of stay, which has been quite erratic over time, has remained above 2.5 nights and it is characterized by a longer length of stay by international tourists compared to Italians. International visitors therefore dominate the accommodation occupancy rate especially during the summer term. As far as the Italian tourists, they contribute to spread the season.

The gap between international and Italian tourist started to close in the 2000, after which there is a nearly equal length of stay for the two groups (Fig. 6). This change might be attributed to the overall modifying patterns in international tourism, which show tourists taking more, but shorter, vacations. Therefore, focusing on inter-regional tourism flows make sense in view of the growing market of short-haul tourism travel in combination with the expanding volume of short breaks and short holidays.

Both the statistics on the correlation between original series (Fig. 1-3) and seasonally corrected series (Fig. 4-6), and the evidence on the standard deviation confirm that the tourism in the Province of Como is strongly characterized by seasonality (see Tab. 2), although the difference between the peak summer season and the shoulder-season (spring) is smaller for domestic than international tourism.

Whenever row data is affected by seasonal effects, it may conceal the true underlying economic development of a time series. Thus, the purpose of a seasonal adjustment is to

simplify the data so that the time series may be more easily interpreted without a significant loss in information. Once the seasonal component have been eliminated, the comparison of data between series with different patterns becomes possible.

The plots of arrivals and presences show a high concentration of the international tourists during the summer season, when they also tend to have a peak in their length of stay (see Fig. 3). On average, the 80% of the International tourists are concentrated in the month of July and August, while it is possible to note the presence of Italian tourist also during the spring term.

Specifically, an examination of the overnight series shows that international tourism demand exhibits a different seasonality with respect to domestic tourism demand. In particular, it can be seen from data presented in Fig. 2 and Fig. 5 that international tourist market is much more seasonally peaked than the Italian one, which exhibits a shoulder season during the spring.

A closer look at the arrival series shows, consistent with the long term data, an upward trend both for international and domestic tourists. Moreover, international overnight stays show a steady growth pattern since 2002, and foreigner tourists spend more nights than Italians do in the same months.

Finally, it is possible to note from Table 2 that the test rejects the null of absence of moving seasonality, leading to the conclusion that moving seasonality is present; and the analysis of seasonal factors (Tab. 2, column 5) shows that seasonality has been decreasing.

4. Policy Implications

Tourism growth often means an expansion of the main season (BarOn, 1975). This is the case of the Como area where tourism flows have been increasing over the last years according to the same seasonal patterns of the past, generally highly concentrated in the summer time. The seasonal phenomenon observed in the area can cause problems of sustainability due to the increasing of population during the peak season that generates socio-cultural negative effects on the destination: congestion, crowded streets, traffic, lack of parking, etc.

In light of the case study analysed, we can identify possible paths of development for the Province of Como aimed at reducing seasonality and acting both on the demand and on the capacity. From the demand perspective, the tourist flows are concentrated in the summer, especially because of the prevalence of the "lake" motivation of tourists. Policy makers could therefore encourage tourism in shoulder-seasons and in off-season by promoting different forms of tourism: cultural, slow, sport, business, etc. (Butler, 2001; Cuccia, Rizzo, 2011a, 2011b). Tourists motivations differ changing from peak season to off-season (Rosselò-Nadaal et al., 2004), thus, matching seasonal motivation with tourism products and services offered is needed to increase the number of tourists in shoulder seasons. For this purpose, policy makers should define the mix of segments for each season on a long-term basis to know the priority segments and the appropriate marketing strategies to be developed (Soo Cheong, 2004; Mauri, 2012). In particular, over the last years the Province of Como has realized the potentiality of slow tourism, a market niche that allows a sustainable and not aggressive development of the territory. However, this policy should be supported by practical projects which aim is the development and redevelopment of resources (pedestrian areas, cycling lanes, etc.).

Other strategies relating to the demand side could be price differentiation, according to the season and the market segment, and events and festivals organization. Referring to the second strategy, it is helpful to spread event calendar over the entire year to attract tourists also in medium-low season, changing the theme of the event according to the specific target market that visits the destination in that period. This policy allows also to exploit more the complementary potential of different kind of tourism, combining for example business and leisure motivations, and to extend the average length of stay of tourists. Obviously, these actions should be supported by the private and public operators of the area (hotels openings, transportation frequency, etc.). At the same time, these policies can encourage higher flows of

domestic tourism which are less seasonal than international ones and present a shoulder season during spring.

From the supply side (capacity management), the Province of Como presents some geographical constraints that impede an overdevelopment of existing operators (new hotels or higher dimension of existing hotels). A possible solution could be a new form of accommodation called "scattered hotel" ("albergo diffuso" in italian), more sustainable for the territory, that allows to recover ancient villages respecting the environment and increasing the value of local cultural heritage (Confalonieri, 2011; Dall'Ara, 2009). The main principle of this model is that rooms are scattered throughout different buildings within the town but overseen by one manager with the involvement of the local community in the process. Another possible solution could be involving the tourist in the process by means also of technology in order to spread information about the destination in different languages. An example is the QR code that allow by means of a smartphone to download and visualize a lot of information about various attractions of the destination that could be personalized according to the kind of visitor.

The study shows that one of the main problem of the Province studied is that single interesting projects are developed but rarely they are coordinated in a shared long-term program that involves all the actors of the destination, creating a network. The lack of coordination and fragmentation is perceived also analysing the communication strategies that are mainly linked to traditional instruments sometimes ineffective also at a local level. With the development of new technologies, even more considered by customers in the decision-making process, could be advantageous for the destination to plan an integrated communication strategy shared among local public and private operators.

Concluding, from the study conducted emerges the need to develop appropriate actions aimed to reduce seasonality. Through a network approach among public and private operators of the

local community as well as the residents it is possible to offer an integrated multi-product service that attracts and combines tourists of different motivations and contribute to balance the demand within the area (Buhalis, 2000).

5. Conclusions

This study analyzes and tries to understand the evolution of international and domestic tourism in the Province of Como to evaluate criticism and potentiality of tourism development. The findings show that international and domestic tourist flows in the Como area are increasing in the last years but, at the same time, the analysis of seasonal patterns of Italian and foreigners tourists demonstrates some differences that could be considered by the local operators to develop future strategies. Therefore, demand and capacity management strategies are proposed with the purpose of reducing negative seasonality impacts on the destination, in light of the differences between the various target markets.

The main conclusion of this study is that, in the Como area, fragmentation should be replaced with a network approach among public and private operators of the local community as well as the residents in order to offer an integrated multi-product service that attracts and combines tourists of different motivations. Only following this approach it could be possible to fulfill demand and capacity management strategies, reducing seasonality.

With respect to the existing literature, the content of this paper can help both public authorities and destination management organizations of the Como area, that are involved in improving the competitive position of the area, to develop strategies and decision making.

This is a first step of a wider project aimed at identifying possible paths of tourism development of the Como area. Future steps of the study will analyse the tourism flows according to the country of origin, trying to understand which are the nationalities presenting a seasonal pattern that can match that of the destination. In this way, policy makers could develop long-term strategies aimed at attracting these new foreigner customers to extend the

main season and/or to increase flows in off-season. Moreover, future research will consider also the pattern of seasonality of various kind of tourism (lake, mountain, business, urban) linked to different customers' motivations in order to demonstrate which are the segments that really contribute to reduce seasonality. Another interesting point to be studied is the seasonal patterns according to the kind of accommodation. A first analysis seems to confirm a less seasonal impact of hotel flows compared to the non-hotel sector but further analysis is needed on this topic.

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Appendix

A1. Original series

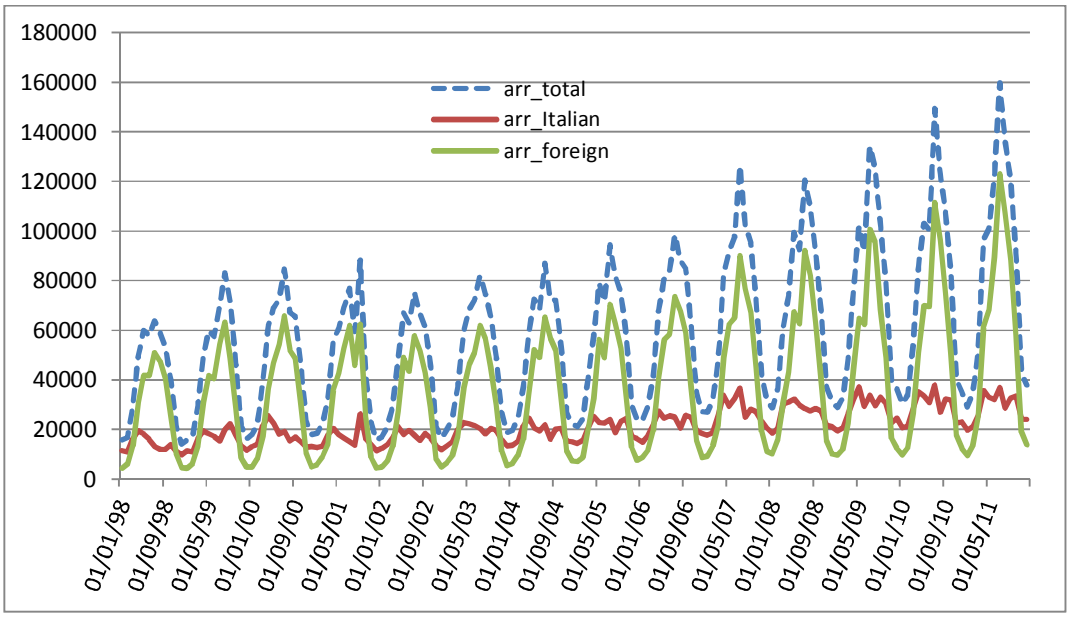

Figure 1. Patterns of tourist arrivals: original series.

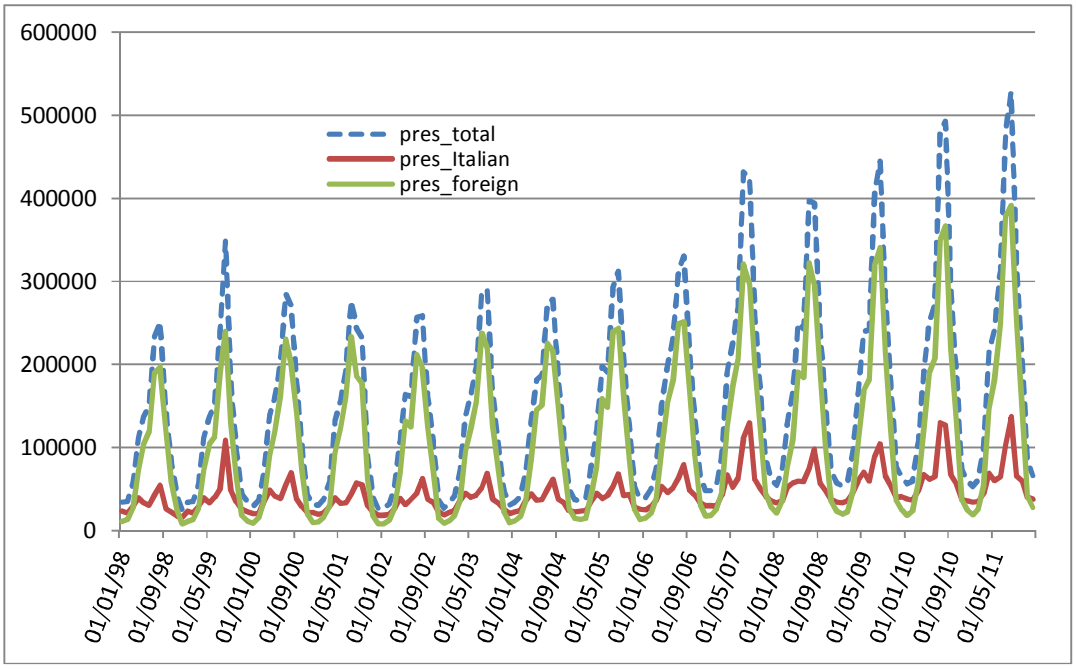

Figure 2. Patterns of tourist presences: original series.

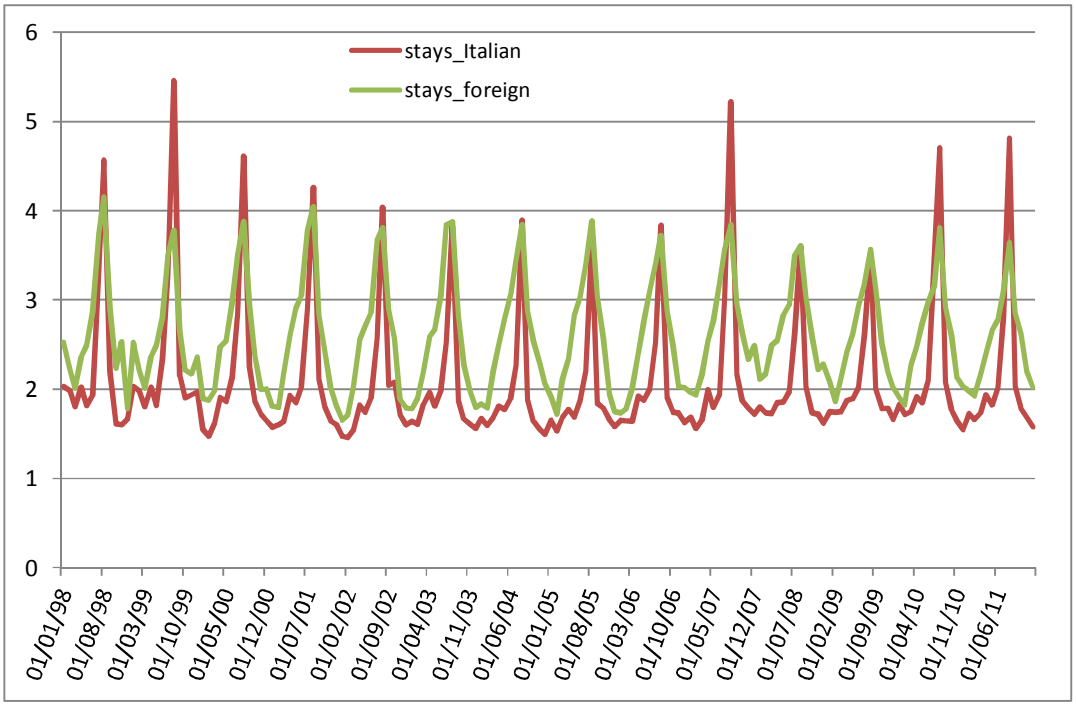

Figure 3. Patterns of tourist overnight stays: original series.

A2. Seasonally Adjusted Series

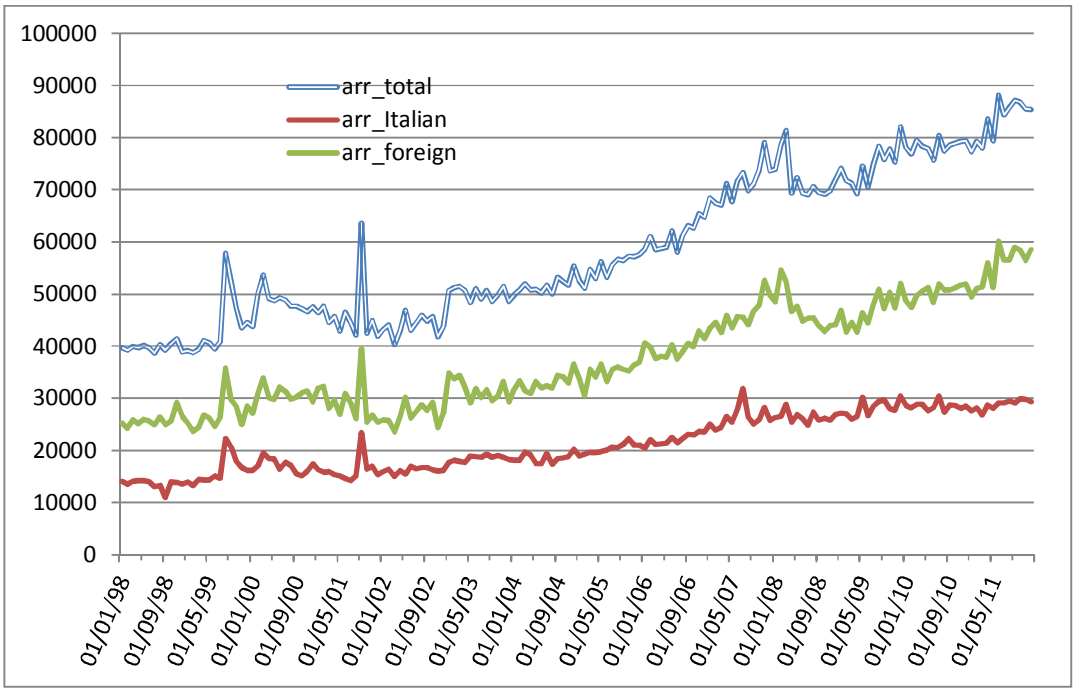

Figure 4. Patterns of tourist arrivals: seasonally adjusted series.

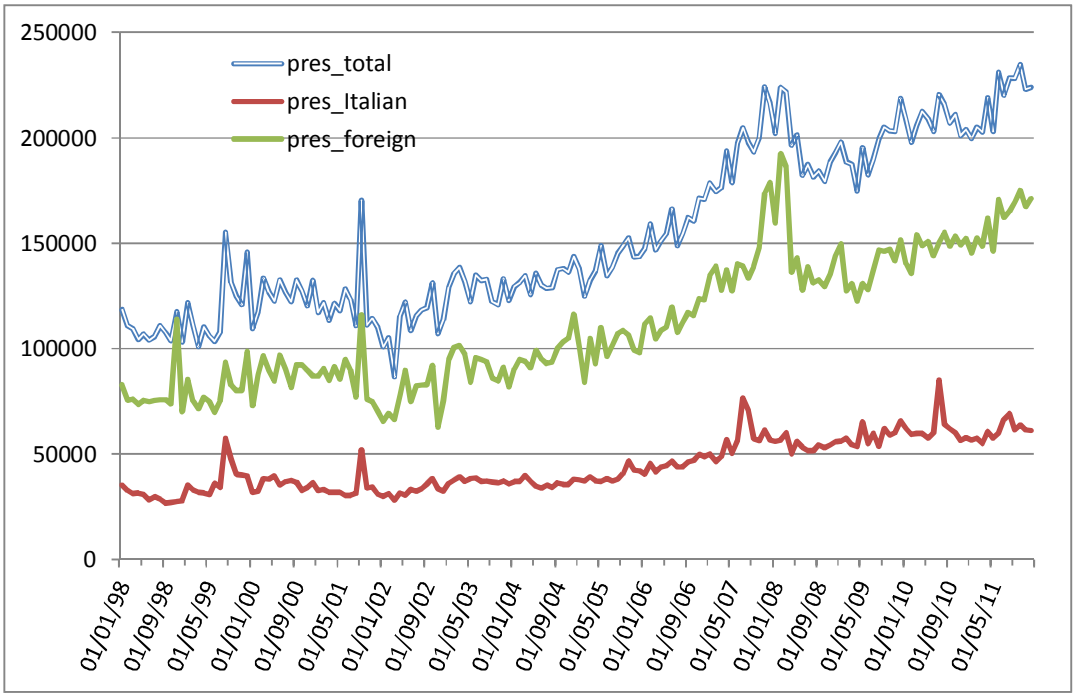

Figure 5. Patterns of tourist presences: seasonally adjusted series.

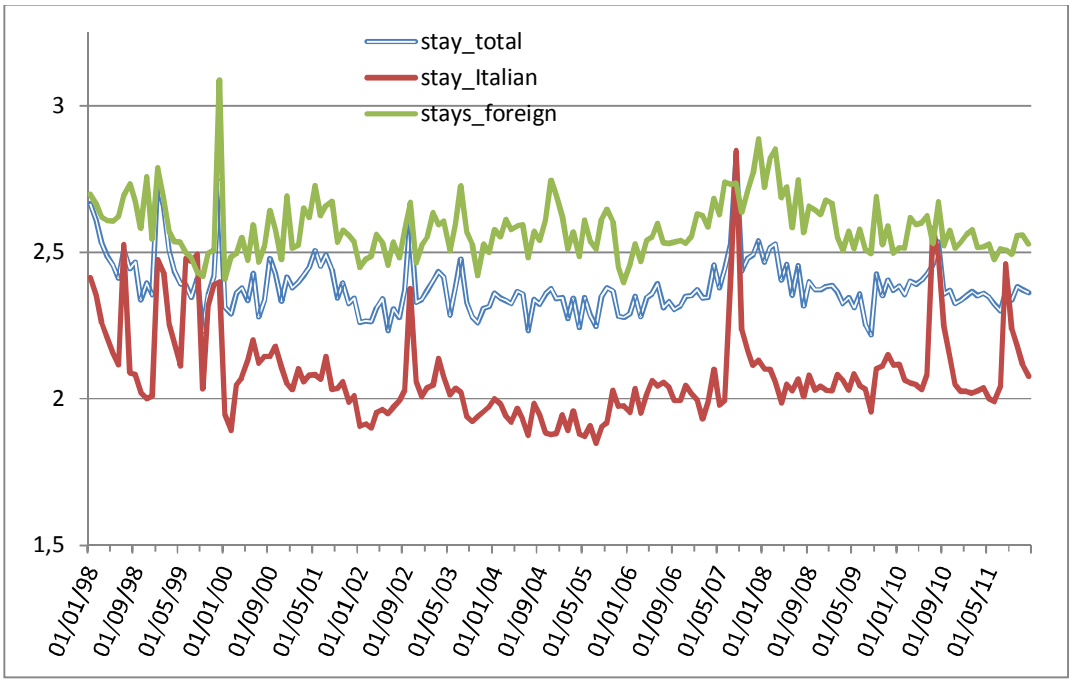

Figure 6. Patterns of tourist overnight stays: seasonally adjusted series.

A3. Tables

Table 1: Descriptive Statistics on Tourism Demand

	Arrivals			Presences			Avarage Stays		
	Italian tourists	International tourists	Total	Italian tourists	International tourists	Total	Italian tourists	International tourists	Total
1998-2002									
Average	15846.48	29130.22	44976.70	34375.37	86076.28	120451.7	2.161	2.58	2.41
max	2611	65707	88396	108609	239795	348404	5.46	4.16	4.24
(date)	(Sept.2001)	(Jul.2000)	(Sept.2001)	(Aug.1999)	(Aug.1999)	(Aug.1999)	(Aug.1999)	(Aug.1998)	(Aug.1998)
min	9539	4268	14057	15894	7778	23938	1.46	1.65	1.52
(date)	(Dec.1998)	(Dec.2001)	(Dec.1998)	(Dec.1998)	(Dec.2001)	(Dec.1998)	(Feb.2002)	(Jen.2002)	(Jen.2002)
2003-2008									
Average	21189.98	36132.35	57322.33	44635.48	109976	154611.5	2.01	2.59	2.36
max	36517	90004	126521	129635	322540	431963	5.22	3.88	4.18
(date)	(Jul.2007)	(Jul.2007)	(Jul.2007)	(Aug.2007)	(Jul.2008)	(Jul.2007)	(Aug.2007)	(Aug.2005)	(Aug.2007)
min	13258	5368	18626	18805	8450	27255	1.49	1.72	1.60
(date)	(Dec.2003)	(Dec.2003)	(Dec.2003)	(Dec.2002)	(Dec.2002)	(Dec.2002)	(Dec.2004)	(Feb.2005)	(Feb.2005)
2009-2011									
Average	28501.75	51003.06	79504.81	61580.64	146709.3	208289.8	2.12	2.55	2.36
max	37689	122975	159849	137161	391366	528527	4.82	3.81	4.01
(date)	(Jul.2010)	(Jul.2011)	(Jul.2011)	(Aug.2011)	(Aug.2011)	(Aug.2011)	(Aug.2011)	(Aug.2010)	(Aug.2010)
min	19247	9501	28847	33648	18416	52782	1.55	1.82	1.72
(date)	(Jen.2009)	(Jen.2011)	(Jen.2009)	(Jen.2009)	(Jen.2010)	(Jen.2011)	(Dec.2010)	(Feb.2010)	(Dec.2010)
1998-2011									
Average	21216.68	37412.79	58629.48	44756.01	109916.10	154672.10	2.09	2.58	2.38
max	37689	122975	159849	137161	391366	528527	5.48	4.16	4.24
(date)	(Jul.2010)	(Jul.2011)	(Jul.2007)	(Aug.2011)	(Aug.2011)	(Aug.2011)	(Aug.1999)	(Aug.1998)	(Aug.1998)
min	9539	4268	14057	15894	7778	23938	1.46	1.65	1.52
(date)	(Dec.1998)	(Dec.2011)	(Dec.1998)	(Dec.1998)	(Dec.2011)	(Dec.1998)	(Feb.2002)	(Jen.2002)	(Jen.2002)

Table 2: Statistics on Seasonality

	(1) Correlation (original series, corrected series)	**(2)** Std. deviation of seasonal factors	**(3)** Test of total seasonality F F(11,156)	**(4)** Test of moving seasonality F(13,143)	**(5)** Seasonal factors: min max 1998 min max 2011
Arrivals					
Italian tourists	0.82	0.18	132.08*	0.64	71 – 136 71 – 127
International tourists	0.35	0.65	907.25*	2.64*	17 – 204 19 – 217
Total	0.46	0.46	1011.69*	1.55	36 – 165 38 – 190
Presences					
Italian tourists	0.64	0.37	485.88*	1.58	57 – 190 60 – 198
International tourists	0.25	0.81	955.34*	1.70	11 – 260 13 – 237
Total	0.35	0.67	1708.17*	1.00	23 – 227 26 – 231
Overnight Stays					
Italian tourists	0.45	0.33	503.27*	3.00*	80 – 219 76 – 196
International tourists	0.16	0.60	211.89*	2.38*	-76 – 142 -66 – 114
Total	0.13	0.66	566.10*	3.10*	-65 – 180 -62 – 152

Notes: **Column (1)** reports the correlation between the original series and the seasonally corrected series, i.e., $Cor(X_t, O_t)$: a higher correlation means a lower degree of seasonality in the original series; **Column (2)** reports standard deviation of seasonal factors (std. dev. (St)); **Column (3)** reports a F test on the null of the absence of seasonality: the critical value at the 5% of significance is F(11,156)= 1.80, and larger levels (marked with *) mean that the null of absence of seasonality is rejected; **Column (4)** reports a F test on the null of absence of moving seasonality; the critical value at 5% is F(13,143)=1.72: higher values (marked with *) mean that the null is rejected, so that moving seasonality is present; **Column (5)** reports the minimum and maximum values of seasonal factors ($SF_t = S_t \times 100$) in 1998 and 2011.